

## ABSTRACT

A method for performing a medical procedure is provided, including recording geometric information at a plurality of time points in a plurality of cardiac cycles of a heart of a subject. Subsequently, a transient event is detected that is produced at a location on the heart during a cardiac cycle. A time of occurrence of the transient event is identified in the cardiac cycle during which the transient event occurred. A map of the heart is displayed responsive to the identified time of occurrence and the geometric information recorded at a time point in the cardiac cycle that corresponds to the time of occurrence of the transient event.

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